

# **Alaska Timber Industry History**

## **Southeast Alaska**

### **Summary**

From the 1867 purchase of Alaska until after the 1907 proclamation establishing the Tongass National Forest, only small amounts of the timber resources in Southeast Alaska were harvested for local use. Subsequent to 1907, the newly established Forest Service began offering 25-year timber sale contracts that included a requirement to construct a pulp mill. The intent was to establish a fully integrated manufacturing industry that would utilize all of the commercial timberland in the region. None of those early efforts were successful until the agency increased the term of the contracts to 50-years and added an assurance of an economic timber supply. Only two pulp mills were ultimately constructed, but they operated as intended from the mid-1950s until the mid-1990s. An illegal termination of one long-term contract and the imposition of unilateral contract changes that eliminated the viability of the other long-term contract brought an abrupt end to the pulp mill operations.

The Tongass National Forest currently encompasses about 93% of the timberlands in Southeast Alaska and, consequently, the Forest Service has monopoly power over the timber supply. After 1990, the Forest Service dramatically reduced the volume of timber offered for sale annually and in 1997 the agency imposed harvest constraints that resulted in large increases in the cost of harvesting national forest timber. These two management changes effectively wiped out most of the remaining timber industry. Current industry employment is about 15% of what it was when the pulp mills were operating.

### **1867-1947 Pre-Tongass Timber Act**

From 1867 when Alaska was purchased from Russia until the early 1900s, the primary use of timber in Southeast Alaska was by the mining and fishing industries. Every significant mine in the region logged one or more hillsides to provide lumber and timber for the mine. The fishing industry used the biggest trees for fish traps, while local sawmills also kept busy sawing lumber for canneries and salteries plus crates for shipping salmon. Pole size timber was utilized for pilings. Most of the timberland in Southeast Alaska, then and now, is federal land and it wasn't until 1907 that the federal government established an agency to manage the timberlands.

In a 1982 history of the Forest Service appraisal system, Al Wiener, former Chief of Timber Appraisal, explained, "Foresters in the 1890's and early 1900's envisioned that the United States Forest Reserves, then being created, would provide a continuous supply of timber for the needs of local industry, under Federal control. Their vision has been realized in the National Forests, as the Reserves were renamed in 1907. Under the Forest

Service's sustained-yield principles, these Forests today furnish raw materials for one-third of the lumber and one-half of the plywood manufactured in the United States each year."

In 1905, Agriculture Secretary James Wilson created the Forest Service to manage the forests and the agency adopted three guiding principles:

1. Sustained yield
2. Multiple use
3. Protection of local communities

In 1911, the agency adopted the practice "clean cutting", which was later labeled "clear cutting", as the "best and most consistent silvicultural system". A 1972 Forest Service brochure further explains that removing all of the timber in an area allows sunlight to reach the forest floor. The added heat and light enhances the growth of both trees and deer browse. In contrast, partial cutting leaves shade that retards the growth of trees and browse plus, since hemlock is more shade tolerant than spruce, the young-growth in a partial-cut area will be predominantly hemlock. Further, leaving mature and over-mature timber standing will increase the risk of insect and disease problems in the young-growth.

Given this pragmatic attitude, the agency took an aggressive approach in attempting to foster a fully integrated timber manufacturing industry by offering long-term timber contracts that included a requirement to construct a pulp mill.

- In 1910, a Norwegian company proposed constructing a mill in the Thorne Arm area but their proposed terms were not accepted by the agency (e.g. the company wanted a 99-year contract term, which was beyond the authority of the agency at the time).
- In 1912, the agency worked unsuccessfully with the San Francisco Chronicle on a large pulp timber sale.
- In 1913, the Forest Service offered a 300 million board foot timber sale on the Stikine River and a billion board foot timber sale in the Behm Canal area but received no bids.
- In 1920, a 100 million board foot timber sale was purchased by Alaska Pulp and Paper Company which constructed a small pulp mill at Port Snettisham; but, Alaska Pulp and Paper was able to operate for only a couple of years before closing, citing high shipping costs as the cause of the closure.
- In 1922, the Alaska Gastineau Company purchased a 1.8 billion board foot timber sale on Admiralty Island and in 1923 another large timber sale was advertised in Thomas Bay. Both of these timber sales were eventually cancelled due to financial concerns.
- In 1927, two more pulp sales were advertised. One in Juneau was purchased by a pair of newspaper companies and one in Ketchikan was purchased by Crown Zellerbach Corp. Both of these sales ended because bureaucratic delays in processing permits from the Federal Power Commission delayed operations until the onset of the Great Depression.

Although the Forest Service continued to sell timber sales, there were no additional efforts to establish a pulp manufacturing industry in Southeast Alaska until after 1947 when Congress passed the Tongass Timber Act, which was primarily enacted to authorize the Secretary of Agriculture to sell “*timber growing on any vacant, unappropriated, and unpatented lands within the exterior boundaries of the Tongass National Forest in Alaska, notwithstanding any claim of possessory rights*”. However, in 1942 the Forest Service did establish the Alaska Spruce Log Program. The agency contracted logging, towing and rafting operations that consisted of several small logging operations and a 250-man camp at Edna Bay where flat rafts were assembled into ocean-going Davis rafts. The plan was to deliver 100 million board feet of high-grade spruce logs annually to Anacortes, Washington where they would be peeled for plywood for use in constructing British bombers. In 1944, the War Production Board announced that future planes would be constructed of metal and the Alaska Spruce Log Program ended after sending only 38.5 million board feet of high-grade spruce to Anacortes and 46 million board feet of lower grade timber to local mills. By the end of that year, all of the related logging camps had closed and the Edna Bay camp was practically a ghost town.

### **1947--1990 Pre-TTRA**

During the long lull in long-term pulp contract offerings, the agency contemplated how best to overcome the financial concerns that were preventing the establishment of a pulp manufacturing industry. The primary economic problems were the economy of scale for an infant industry, an adequate length of time to amortize the immense investment involved in constructing a pulp mill and the uncertain cost of harvesting the timber. These problems were resolved in the following manner:

1. The Forest Service planned to sell five pulp timber contracts. These contracts, along with the normal timber sales, would provide around 800 mmbf of timber harvest annually. This was considered ample for a reasonable economy of scale.
2. The Forest Service increased the term of the timber sale offerings from 25-years to 50-years.
3. The Forest Service added contract clauses that assured the purchaser that the agency would not select timber nor impose conditions that put the purchasers at a competitive disadvantage. The Puget Sound Clause in the prospectus for the Ketchikan long-term sale was the first such clause:

“Insofar as the timber quality on the sale area will permit, the logging units to be designated periodically in the future for then current operations will not be inferior in timber quality to those being then commonly logged for pulpwood on other Alaska sales or on the northern coast of British Columbia, and the loggability of the included timber stands will be of such character that, so far as the delivered log costs are concerned the purchaser’s pulp manufacturing operation will not be in a disadvantageous position in comparison with similar enterprises in the Puget Sound region”.

In 1947, the Forest Service advertised a revised long-term timber sale near Ketchikan. The timber sale prospectus included a 50-year term, the economic timber clause and the following assurance:

“The chief, Forest Service, having due regard for the interests of the United States and for the protection of the natural resources of Alaska, wishes to facilitate the establishment of such new industry by the purchaser and the operation of the industry on a commercially sound and permanently economical basis.”

The 8.25 billion board foot sale received no bids during the first two offerings, but in 1948 the sale was offered a third time and the newly formed Ketchikan Pulp and Paper Company offered the only bid. After numerous delays, the final contract was signed in 1951 and three years later the mill was constructed and had begun operating. The 1954 opening of the Ketchikan Pulp Company (KPC) pulp mill drew optimism and excitement from many sources:

- A.W. Greely, Regional Forester, wrote: “One who is not a forester can hardly appreciate how much difference a local market for hemlock pulp logs makes in the management of the Tongass National Forest. Forests are managed not by being left to themselves, but by the direction and control of some action which man brings on”.
- B. Frank Heintzleman, Governor of the Territory, wrote: “Hereafter in Alaska the 14<sup>th</sup> day of July will be celebrated as the anniversary of one of the most important events in the Territory’s history-the dedication of the Ketchikan Pulp Co. This is not only the first plan of its kind in Alaska but also represents the largest single industrial investment ever made here. It is an important milestone on Alaska’s road to full industrial development”.
- R. E. McArdle, Chief of the Forest Service, wrote: “The Forest Service will continue to foster development of forest product industries in Alaska to the extent needed for full utilization of the sustained yield cutting capacity of the Tongass National Forest. Cutting of this timber will be so conducted both as to rate and manner to maintain permanently a supply of raw material for these plants”.

By 1956, just two years after the Ketchikan mill started operations, the mill reported more than a million dollar profit on twenty-five million dollars of sales.

Three more pulp timber sales were subsequently sold on the Tongass:

- A 5.25 billion board foot timber sale near Sitka. This pulp timber contract was signed in 1957 and the requisite mill was operating two years later. This contract had an economic timber clause similar to the Puget Sound Clause that assured the timber provided to the purchaser would be economically comparable to the timber provided to other such timber sales in Alaska.
- A 3 billion board foot timber sale near Wrangell. This timber sale contract required construction of a small pulp mill and a 40 mmbf per year sawmill. The

- requisite sawmill was constructed and operated, but not the pulp mill. Consequently, in 1967 the contract was downsized to only 1 billion board feet.
- An 8.75 billion board foot timber sale on Admiralty Island near Juneau. This timber sale was turned back to the Forest Service when the purchaser-Georgia Pacific-decided to enlarge an existing mill at Samoa, California instead of constructing a new mill. The Juneau timber sale was offered again in 1965. The second offering was never awarded because the purchaser backed out, citing higher than expected construction costs for the pulp mill. In 1967, the timber sale was offered to the second high bidder from the second offering - US Plywood/Champion Papers - and the sale was awarded in 1968. The Sierra Club challenged the Juneau timber sale and after years of nuisance litigation, the sale was finally terminated by mutual agreement of the purchaser and the Forest Service.

Recognition of the need to control the cost of timber harvest was taken for granted in those early years of the Alaska timber industry. The 50's through most of the 70's were years of learning for both the timber purchasers and the Forest Service. There was a cooperative effort and the contracts operated on a bilateral basis. Disagreements for the most part were settled between the parties. The roads and cutting units for the long-term timber sales were laid out by the purchasers under the supervision of the Forest Service. Issues regarding fish stream management were addressed jointly by the Forest Service, State Fish and Game and the purchaser. Beginning in 1959, the Alaska Loggers Association established a standing committee that met regularly with the Forest Service to discuss appraisals, permitting issues, logging systems, road construction costs, timber sale designs and other items that impact costs. In the mid-1970s, the Forest Service took over the job of designing and marking cutting units for the long-term timber sales. At the same time, the agency adopted a 100-acre cutting unit limit. This limitation greatly reduced the volume of timber that was available to harvest from each mile of road that was constructed; consequently, the road amortization rate increased dramatically and thus limited both the amount of stumpage and the amount of profit that could be generated by harvesting timber.

Also during the late 60' and early 70's, the industry began developing markets for sawn products in order to improve the manufacturing integration and the financial returns to their operations, thus offsetting some of the added cost that resulted from the cutting unit size limitation. Spruce lumber was the primary sawn product prior to this period but hemlock is the dominant species in the region; therefore, the industry effort was focused on selling hemlock sawn products. The effort was successful and a market was developed for hemlock cants and flitches. This satisfied the Forest Service primary manufacture requirements and the Japanese desire to retain their sawmill industry by re-sawing the material from Alaska. Saw logs that were too small or too rough to make cants or flitches were generally chipped for the pulp mills.

Initially, the Forest Service believed that most of the timber would be logged direct to the water with A-Frame cable systems or skidders. Shortly after their startup, the KPC had aerial photographs taken of its sale area and then performed an intensive cruise of the

area. The results of the cruise showed that A-Frame logging would not be the primary method of logging as initially expected because most of the timber was too far from the shore. Truck logging with cable yarding to the roadside was the method that would dominate future logging operations. By the mid-70's, A-frame timber sales were phased out. Although there were a few A-frame loggers that had the financial strength and knowledge to transition to the more capital intensive road construction and truck logging operations, most of the small operators were simply bought out. The average A-Frame operation logged between 3-8 million board feet per year while an average truck operation would harvest 3-4 times that amount. The last A-Frame operation was Harbour Log at East Point near Wrangell in the early 80's. Helicopter logging became much more prevalent after the mid-1980s and as harvesting equipment evolves, mechanized logging systems are becoming more common.

In 1971, the Alaska Native Claims Settlement Act (ANCSA) was enacted. This Act established 13 Native regional corporations and 200 Native village corporations throughout the state, transferred \$962.5 million to these new entities and transferred more than 40 million acres of land, including surface and subsurface rights, to the corporations. In Southeast Alaska, the land grants resulted in fee-simple title to extensive timberlands (after a specified selection and conveyance process). Title to the majority of these timberlands was finally conveyed in the late 1970s and harvest on Native land began in earnest in the early 1980s.

Additionally, in 1980, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA). Outgoing President Jimmy Carter signed the bill into law just before he left office in January, 1981. ANILCA established additional Wilderness and National Monuments in Southeast Alaska, further reducing the area of the Tongass that could contribute timber to the local economy. In order to ensure that these land withdrawals from the available timberland base did not harm the existing timber industry, the Act mandated that the Forest Service would offer 450 million board feet of sawlog timber annually. Since much of the Native and wilderness withdrawals were concentrated in high volume timber stands, the Act also established a fund that the Forest Service could utilize to construct roads and facilities to compensate for the economic impact of the land withdrawals.

Shortly after 1980, the Native corporations began harvest operations on their private timberlands. Most of the sawlog timber from these private timberlands was exported overseas, but there were also a lot of pulp-grade logs that were harvested and the two pulp mills – at Ketchikan and Sitka – were able to purchase most of this fiber. These additional pulp logs helped sustain the pulp mills through a worldwide depression in timber products prices in the early to mid-1980s. During this depression, the Ketchikan Spruce Mill was permanently closed; but by the late 1980s, the markets had rebounded and private pulp logs were still available. This abundance of pulp fiber allowed the two long-term timber sale purchasers to divert even more saw logs to the sawmills, thereby further enhancing the manufacturing integration in the region. KPC added a small-log side to the mill it was leasing at Annette Island and also constructed a new small-log sawmill in Ketchikan.

## **1990--Present**

As intended, the Tongass timber sales sustained thousands of year round jobs and a strong economic base in an otherwise economically depressed region. Sadly, in 1990 Congress passed more legislation - the Tongass Timber Reform Act (TTRA) - that established additional Wilderness and roadless areas that were allegedly important for subsistence users but were “missed” in the 1980 package of land withdrawals. The politicians at that time promised that no jobs would be lost as a result of the legislation, despite the elimination of the guaranteed annual timber supply mandate that ANILCA had established as a compromise when the first round of Wilderness, Monument and Roadless Area set-asides were established (the guaranteed timber supply level was 450 million board feet - net scribner -annually).

After 1990, the industry struggled to maintain operations despite the shrinking timber supply and as a result, the volume of timber-under-contract was not replenished with new timber sales and quickly plummeted from over 2,000 million board feet in 1990 to about 100 million board feet in 2007. Most of the initial decline in timber-under-contract was from long-term timber sale volume; but, the industry had been fully integrated and the long-term timber sale saw logs were commonly traded for pulp logs and chips or simply sold to the other sawmills in Southeast Alaska. Consequently, all of the mills were affected by the loss of the long-term timber sale volume.

TTRA also gave the Forest Service authority to make unilateral contract modifications to the two long-term timber sales. The changes that the agency ultimately imposed on these contracts eliminated nearly all potential for profit.

In 1994, the purchaser of the Sitka long-term timber sale closed its pulp mill and announced plans to construct a medium density fiberboard plant in its place. The purchaser was negotiating its contract terms with the Forest Service when the agency abruptly and illegally cancelled its contract.

The market price for dissolving pulp reached an all time high in 1995 and Canadian mills began bidding more aggressively for native pulp logs from Southeast Alaska, thus driving the price of pulp logs from about \$180/MBF to over \$350/MBF. KPC, with the sole remaining pulp mill in Southeast Alaska, had been denied access to its full contract volume in the years leading up to this market event and thus was compelled to chip sawlogs plus pay the unprecedented high pulp log cost in order to keep its pulp mill operating in 1995. The combined cost of diverting sawlogs to its pulp mill and purchasing high-priced pulp logs to replace the shortfall in fiber from its long-term timber sale mooted any benefit from the all-time high market prices. In 1996, after the pulp market had already declined, the Forest Service appraisal system picked up the high pulp prices from 1995; and, based on procedures developed pursuant to the unilateral contract changes that the agency had imposed in 1990, increased the stumpage rate for KPC from \$54/MBF to \$144/MBF. This additional stumpage caused an enormous loss

for KPC. The lack of adequate pulp fiber combined with the staggering stumpage increases made it clear that there was no longer any opportunity for KPC to be successful in the future.

In late 1996, Ketchikan Pulp Company completed the last of the pollution control improvements for its pulp mill and then negotiated an early end to its contract. The pulp mill permanently closed in March 1997; but, KPC attempted to facilitate a future for its logging and sawmill employees by installing a veneer plant that could utilize the small low-grade logs that had previously been converted to pulp mill chips. In the months leading up to this final long-term sale termination, the Department of Agriculture agreed to a three-year continuation of the long-term timber sale in order to provide adequate timber for a seamless transition into a future without the long-term commitments. Unfortunately for the industry and most of the communities in Southeast Alaska, the seamless transition never happened.

In 1997, the Forest Service adopted a new land management plan for the Tongass and the agency announced that it intended to switch to “ecosystem management”. Under this new philosophy, timber sales became a by-product of ecosystem management and attention to timber sale economics was abandoned. The new land management plan included extremely costly timber sale design constraints that raised the cost of harvesting timber enormously. These constraints included mandating that 30-50% of the timber be left standing in most previously developed areas. The harvesting costs in these areas should have been very low because the roads were already in place; but, the partial-cutting requirement instead made these some of the highest cost areas to operate. The partial cutting requirement also raised grave concerns about worker safety. Other costly constraints included oversize buffers on non-fish streams, a greatly expanded beach fringe no-cut buffer and a system of old-growth reserves that set-aside over a million acres of the highest value, lowest cost timberlands.

As the pre-1997 timber sales were harvested and the newly designed timber sales were advertised, the economic impact of the 1997 land management plan became apparent and despite good markets for hemlock, spruce and cedar lumber many of the timber sales that were advertised during this period appraised enormously deficit due to the high cost impact of the 1997 land management plan. The region’s sawmills initially purchased only the economic timber sales, but as the mills depleted their volume of timber-under-contract, they began worrying about mill closures and losing their customers. In desperation the mills began purchasing marginal and deficit timber sales and by 2001 the bulk of the timber-under-contract was comprised mostly of deficit timber sales and the mills were losing money. About this time, Congress began prohibiting the agency from offering timber sales that did not appraise with a full profit and risk allowance. In 2003 and 2004 many of the deficit timber sales that had been purchased were mutually terminated when the purchasers, the agency and Congress all recognized that those high-cost timber sales could never be economic. This legislation eliminated most of the deficit timber sales, but the agency planners did not have an economic mandate and they

continued to prepare NEPA documents (Environmental Impact Statements) for timber sales without regard to economic common sense. Consequently, only a small percentage of the post 1997 NEPA-approved timber sales were actually ever offered. Environmental activists recognized a new opportunity to obstruct timber sales - they began dividing the cost of the Environmental Impact Statements by the small volume of timber that was actually sold and then urged Congress to stop funding timber sales in Alaska arguing fiscal prudence. Others more rationally argued that it made more sense to fix the economic problems than to end the timber sales.

As a result of the changes in management of the national forest, the federal timber sale program has shrunk by about 90%; and, since the Tongass National Forest encompasses about 93% of the timberlands in Southeast Alaska, the timber industry has similarly declined. Manufacturing integration, the economy of scale and a supply of timber adequate for normal sawmill operations were all eliminated as the timber supply declined.

The most recent TLMP Amendment, announced in early 2008, must eliminate these unworkable prescriptions if there is to be a timber industry in Southeast Alaska. The Forest Service vows this new plan will support an efficient and sustainable industry. With minimal timber remaining under contract and with a land management plan that looks a lot like the failed 1997 plan, the future of the timber industry is uncertain.

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